

Remarks/Arguments

Applicants have received and carefully reviewed the Office Action of the Examiner mailed June 11, 2010. Currently, claims 29, 31-34, 36-37, 39-45, 47-56, and 58-70 remain pending. Favorable consideration of the following remarks is respectfully requested.

Telephone Interview

Applicants' representative, Nancy Parsons, would like to thank the Examiner for the courtesies extended during the telephone interview of September 9, 2010. The language and scope of the §1.131 declaration and accompanying exhibits were discussed. No agreement was reached.

Declaration under 37 CFR § 1.131

In paragraph 3 of the Office Action, the Examiner states that the previously submitted Declaration was reviewed and not found to be convincing because the Invention Record listed "n/a" under a heading of reduction to practice, and the declaration was unsigned. The Examiner asserts the second declaration, or supplemental declaration, does not establish possession of either the whole of the claimed invention or something falling within the claim, as detailed in MPEP § 715.02. Applicants respectfully disagree.

MPEP § 715.02 makes clear that "something falling within the claim" includes a species of a claimed genus. For example, MPEP § 715.02 (II) states "[a] reference or activity applied against generic claims may (in most cases) be antedated as to such claims by an affidavit or declaration under 37 CFR 1.131 showing completion of the invention of only a single species, within the genus, prior to the effective date of the reference or activity". Applicants submit that the documentary evidence (declarations and exhibits) shows that a fuel cell was completed in accordance with the invention and was tested and found suitable for its intended purpose. In the telephone interview with the Examiner, the scope of the specification, including the various embodiments, was discussed in relation to the method used to make the fuel cell described in the documentary evidence. Applicants submit that various embodiments provided in the specification are encompassed by or are species of the genus set forth in, for example, claim 1. In the declaration, the inventors state, "[t]he fuel cell shown in FIG. 9 was made in accordance

with the invention and was tested and found suitable for its intended purpose as shown in FIG. 10.” Applicants submit that the inventors’ statement that the fuel cell shown in FIG. 9 of Exhibit 2 was made in accordance with “the invention” means the fuel cell was made according to the teachings of the specification, which are believed to fall within the genus claim 1.

Sworn declarations by the inventors have been provided which state: (1) they have reviewed and understand the contents of the specification as filed (original oath/declaration); (2) the fuel cell shown in FIG. 9 of Exhibit 2 was made in accordance with the invention; and (3) the fuel cell shown in FIG. 9 of Exhibit 2 was made and tested prior to April 30, 2003. Applicants submit that these declarations fairly show that the inventors were aware of the scope and content of the specification, and attest to the fact that a fuel cell was made in accordance with that specification prior to April 30, 2003 based on the information in Exhibit 2. Applicants submit that MPEP § 715.02 does not require a declaration that shows each and every method step of each pending claim, but rather only needs to establish “possession of either the whole invention claimed or something falling within the claim (such as a species of a claimed genus).” The statement by the inventors that the fuel cell shown in FIG. 9 of Exhibit 2 was made “in accordance with the invention” is believed to be sufficient. In view of the foregoing, Applicants submit that the combination of declarations and exhibits previously filed establishes possession of the invention as a whole or something falling within the claim and an actual reduction to practice prior to April 30, 2003. Reconsideration and acceptance of the declarations is respectfully requested.

Claim Rejections – 35 USC § 103

Claims 29, 31-34, 36, 37, 39-45, 47, 48, 54-56, and 58-70 were rejected under 35 U.S.C. 103(a) as being unpatentable over Leban (U.S. Patent No. 7,049,024) in view of Blunk et al. (U.S. Patent No. 6,942,941).

Applicants respectfully disagree that claims 29, 31-34, 36, 37, 39-45, 47, 48, 54-56, and 58-70 are obvious in view of Leban and Blunk et al. For example, nothing in Leban or Blunk et al. appears to disclose many of the elements of claim 47 including, for example, “a first conductive layer provided on at least a portion of the first electrode top surface, at least a portion of the first electrode bottom surface, and one or more of at least a portion of the first electrode aperture surface, wherein the first conductive layer on the one or more of the at least a portion of

the first electrode aperture surface provides an electrical connection between the first conductive layer on the first electrode top surface and the first conductive layer on the first electrode bottom surface".

In the Office Action, the Examiner appears to rely on the bipolar plates of Blunk et al. as disclosing "a first conductive layer provided on at least a portion of the first electrode top surface, at least a portion of the first electrode bottom surface, and one or more of at least a portion of the first electrode aperture surface, wherein the first conductive layer on the one or more of the at least a portion of the first electrode aperture surface provides an electrical connection between the first conductive layer on the first electrode top surface and the first conductive layer on the first electrode bottom surface". Applicants respectfully disagree.

In the Office Action, the Examiner interprets the bipolar plate of Blunk et al. to be the same as the electrodes. Applicants respectfully disagree. Blunk et al. discloses "two individual proton exchange membrane (PEM) fuel cells connected to form a stack having a pair of membrane-electrode-assemblies (MEAs) 4, 6 separated from each other by an electrically conductive, liquid cooled, bipolar separator plate conductive element 8". (Column 3, line 67 through column 4, line 5). Blunk et al. continues "a preferred bipolar separator plate 8 typically has two electrically active sides 20, 21 within the stack, each active side 20, 21 respectively facing a separate MEA 4, 6 with opposite charges that are separated, hence so-called 'bipolar' plate". (Column 4, lines 7-12). As such, the MEAs 4 and 6 would appear to correspond to the electrodes of Leban and the bipolar separator plate would appear to correspond to the proton exchange membrane separating the electrodes. Thus, it is not understood how the bipolar separator plate is considered the claimed electrodes, as suggested by the Examiner, when Blunk et al. clearly teaches the bipolar separator plate separating the electrode assemblies.

Further, as noted above, the opposite charges of the bipolar separator plate are separated, which is clearly shown in Figures 4-6 of Blunk et al. Hence, nothing in Blunk et al. appears to disclose a first conductive layer provided on at least a portion of one or more of at least a portion of the first electrode aperture surface that provides an electrical connection between the first conductive layer on the first electrode top surface and the first conductive layer on the first electrode bottom surface.

Further, even if the bipolar plates of Blunk et al. could be considered as teaching the claimed first electrode and second electrode (which Applicants believe they do not), Applicants

respectfully assert that there is no reason to modify the teaching of Leban to include the bipolar plates of Blunk et al. As understood from the Supreme Court's decision under KSR, there must be some reason to make the claimed combination. MPEP § 2141 states:

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), stated that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 550 U.S. at ___, 82 USPQ2d at 1396.

(Emphasis added). The Office Action states “it would be desirable to use conductively coated polymer plates, such as those of Blunk et al., instead of entirely conductive plates, such as those of Leban, since such a substitution may result in a lighter fuel cell in the instance that the coated plates of Blunk et al. are lighter than the plates of Leban, or in a less expensive fuel cell in the instance that the materials of the plates of Blunk et al. are less expensive than those of Leban”. Clearly this assertion does not provide the required articulated reasoning with rational underpinning to support the legal conclusion of obviousness, as required by *KSR*. There is no evidence that the proposed substitution would result in a lighter fuel cell or a less expensive fuel cell as argued by the Examiner. For these and other reasons, claim 47, as well as all claims dependent therefrom, are believed to be clearly patentable over Leban and Blunk et al.

Despite the foregoing, and to advance prosecution in a timely manner, Applicants previously filed a Declaration under 37 C.F.R. § 1.131, and a Supplemental Declaration under 37 CFR §1.131, showing completion of the invention prior to the April 30, 2003 filing date of Leban. It is believed that the 1.131 Declarations remove the Leban patent as a reference. Additionally, Blunk et al. was filed on August 6, 2003, which is after the filing date of Leban. As such, it is believed that the 1.131 Declarations also remove the Blunk et al. patent as a reference. For these and other reasons, all pending claims 29, 31-34, 36, 37, 39-45, 47, 48, 54-56, and 58-70 are believed to be clearly patentable over Leban in view of Blunk et al.

Claims 49-53 were rejected under 35 U.S.C. 103(a) as being unpatentable over Leban in view of Blunk et al., and further in view of Badding et al. (U.S. Publication No. 2002/0102450). Applicants respectfully disagree. As discussed previously, claim 47 is believed to be clearly

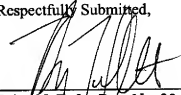
patentable over Leban and Blunk et al., and nothing in Badding et al. appears to remedy the noted shortcomings. Also, the 1.131 Declarations, showing completing of the instant invention prior to April 30, 2003, remove the Leban and Blunk et al. patents as references. Therefore, for at least these reasons, claims 49-53, which depend from claim 47 and include significant additional distinguishing features, are believed to be clearly patentable over Leban in view of Blunk et al. and further in view of Badding et al.

Conclusion

In view of the foregoing, all pending claims 29, 31-34, 36-37, 39-45, 47-56, and 58-70 are believed to be in a condition for allowance. Reconsideration and withdrawal of the rejection are respectfully requested. If a telephone conference might be of assistance, the Examiner is encouraged to contact the undersigned attorney at (612) 359-9348.

Respectfully Submitted,

Date: September 10, 2010



Brian N. Tufte, Reg. No. 38,638
CROMPTON, SEAGER & TUFTE, LLC
1221 Nicollet Avenue, Suite 800
Minneapolis, Minnesota 55403-2420
Telephone: (612) 359-9348
Facsimile: (612) 359-9349